

Table 1

	Initial	Methane	Ethane
	Product	Product	Product
Flow rate, Nm^3/h	10000	8755	1245
Pressure, bara/psia	1.05/15.2	1.35/19.6	6.07/88.0
Temperature, K	112.6	114.6	238
Vapor mole fraction	0.0	0.0	0.0
Component mole fraction			
- nitrogen	0.003	0.00343	0.0
- methane	0.858	0.98	0.0
- ethane	0.096	0.01657	0.6546
- propane	0.030	0.0	0.2410
- i-butane	0.010	0.0	0.0803
- i-pentane	0.002	0.0	0.0161
- n-hexane	0.001	0.0	0.0080

Fig. 1a

Table 2

The parameters of the scheme of the LNG enriching plant according to the Figure 1
(the distillation column pressure is 6 bara (87 psia)

No	Flow rate V, mol/mol LNG	Tempera ture T, K	Pressure P, bara	Vapor mole fraction E,	Composition (see Fig.1a)
1	1.0	112.6	1.05	0.0 sat.	Initial LNG
2	1.0	112.9	6.1	0.0	Initial LNG
3	1.0	132.4	6.09	0.0	Initial LNG
4	1.0	164.0	6.03	0.84	Initial LNG
5	0.8755	138.0	14.9	0.0	Methane product
6	0.1245	138.0	14.9	0.0	Methane product
7	1.0	151.4	6.0	1.0 sat.	Methane product
8	1.0	164.0	5.95	1.0	Methane product
9	1.0	300.0	5.9	1.0	Methane product
10	1.0	303.0	15.0	1.0	Methane product
11	1.0	174.1	14.95	1.0	Methane product
12	1.0	138.0	14.9	0.0	Methane product
13	1.0	160.5	14.93	0.79	Methane product
14	1.0	151.4	6.07	0.72	Initial LNG
15	0.1245	138.2	6.0	0.0	Methane product
16	0.1245	238.0	6.07	0.0 sat.	Ethane product
17	0.8755	114.6	14.85	0.0	Methane product
18	0.8755	114.6	1.35	0.0 sat.	Methane product

Fig. 1b

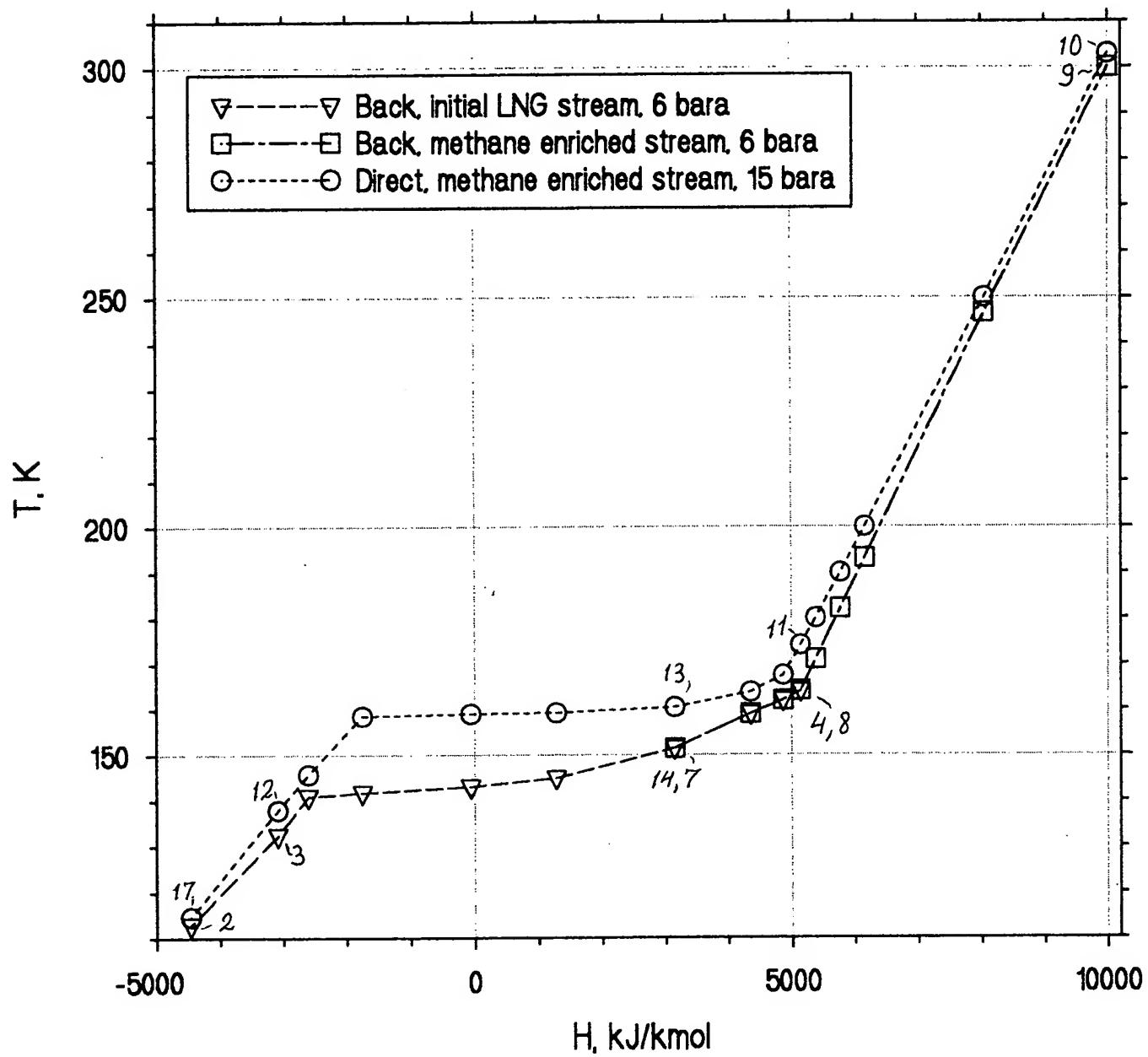


Fig. 1c. The Temperature (T) of the streams in the heat exchanger vs. Enthalpy (H) of the Direct streams.

To Fig. 1: the distillation column pressure is 6.0 bara (87.0 psia).

10,000 Nm³/h

Fig 2

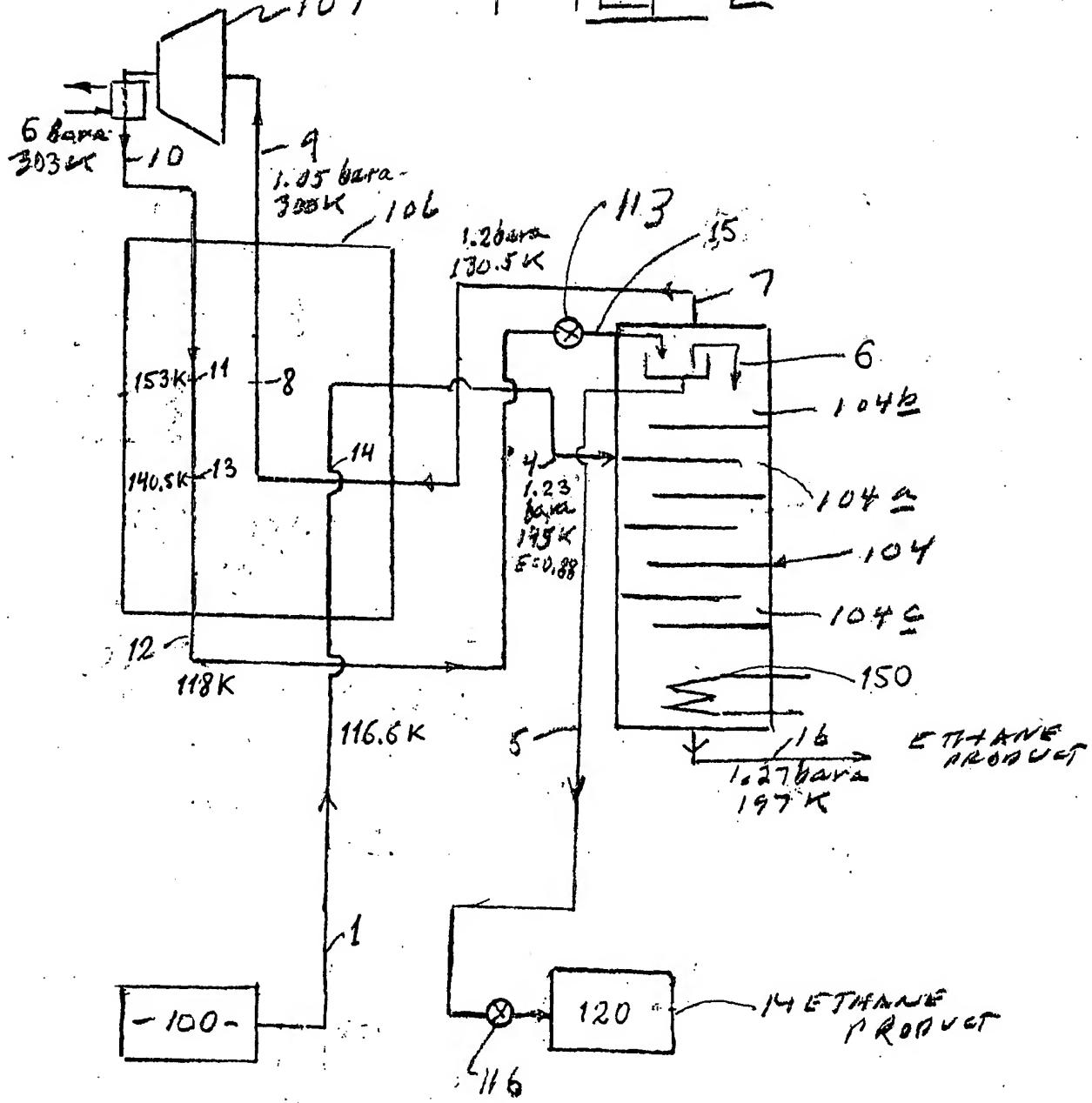


TABLE 3

	Initial LNG	Methane Product	Ethane Product
Flow rate, Nm ³ /h	10000	8755	1245
Pressure, bara/psia	1.4/20.3	1.2/17.4	1.27/18.4
Temperature, K	116.6	113.1	197
Vapor mole fraction	0.0	0.0	0.0
Component mole fraction			
- nitrogen	0.003	0.00343	0.0
- methane	0.858	0.98	0.0
- ethane	0.096	0.01657	0.6546
- propane	0.030	0.0	0.2410
- i-butane	0.010	0.0	0.0803
- i-pentane	0.002	0.0	0.0161
- n-hexane	0.001	0.0	0.0080

Fig 2 a

Table 4

The parameters of the scheme of the LNG enriching plant according to the Figure 2
(the distillation column pressure is 1.2 bara (17.4 psia)

No	Flow rate V, mol/mol LNG	Tempera- ture T, K	Pressure P, bara	Vapor mole fraction E,	Composition (see Fig.2a)
1	1.0	116.6	1.4	0.0 sat.	Initial LNG
4	1.0	145.2	1.23	0.88	Initial LNG
5	0.8755	113.1	1.2	0.0 sat.	Methane product
6	0.091	113.1	1.2	0.0 sat.	Methane product
7	1.0	130.5	1.2	1.0 sat.	Methane product
8	1.0	145.2	1.15	1.0	Methane product
9	1.0	300.0	1.05	1.0	Methane product
10	1.0	303.0	6.0	1.0	Methane product
11	1.0	153.1	5.95	1.0	Methane product
12	1.0	118.0	5.9	0.0	Methane product
13	1.0	140.5	5.93	0.82	Methane product
14	1.0	130.5	1.3	0.81	Initial LNG
15	1.0	113.4	1.2	0.034	Methane product
16	0.1245	197.0	1.27	0.0 sat.	Ethane product

Fig 2 b

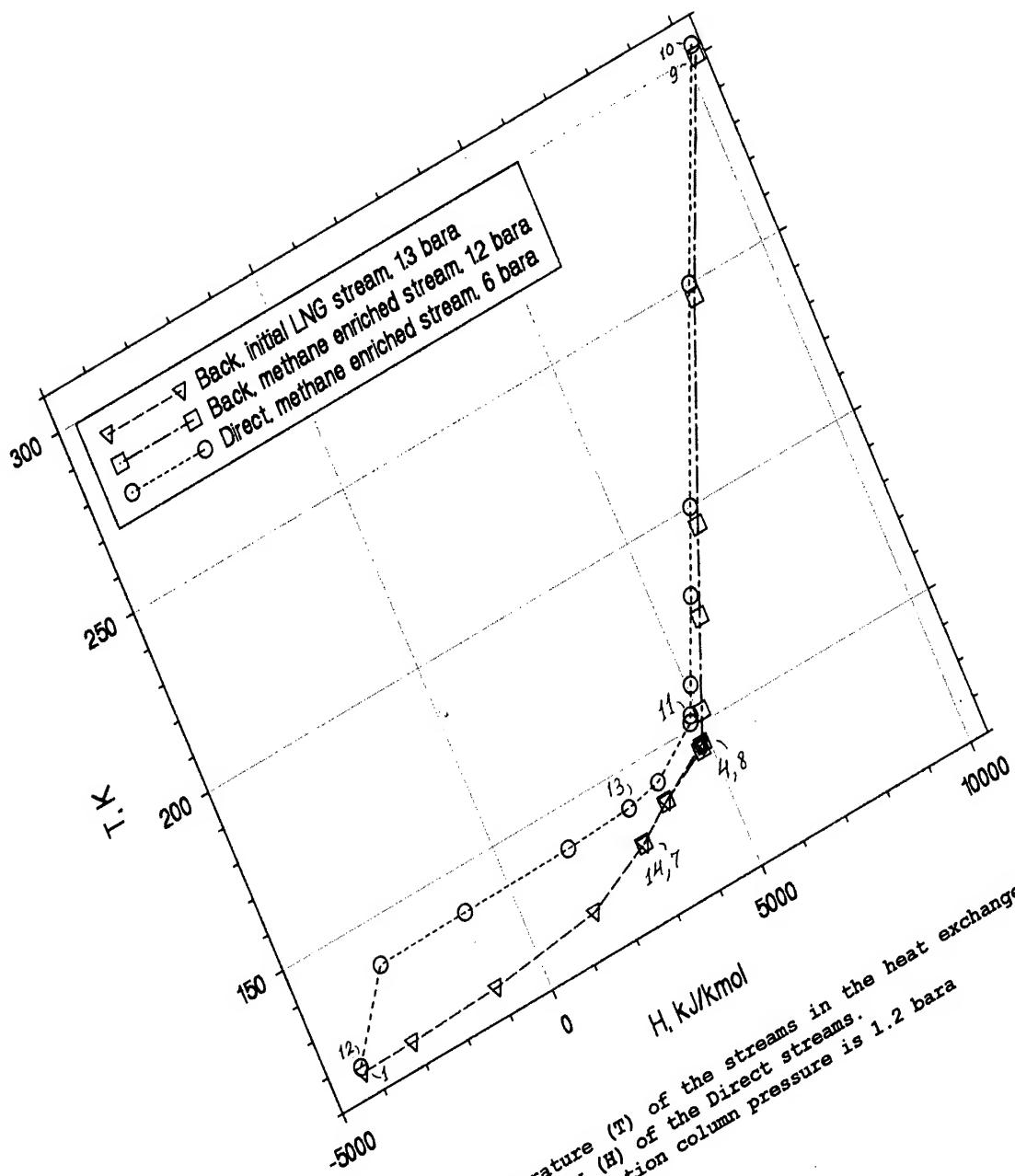


Fig. 2c. The Temperature (T) of the streams in the heat exchanger
to Fig. 2: the distillation column pressure is 1.2 bara
(17.4 psia).